

USSN: 10/001,379
Atty. Docket No.: 2001B095
Amtd. Dated May 21, 2004
Reply to Non-Final OA of February 23, 2004

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of the claims in this Application.

Listing of Claims:

Claim 1 (currently amended): A multi-layer, bioriented film stretched in the machine direction and in the transverse direction, said film comprising

(a) a base layer comprising polyethylene and a cavitating agent, said base layer having a first and second side; and

(b) skin layers on said first and second sides of said base layer, wherein at least one of said skin layers comprises (i) a hydrocarbon resin and (ii) a copolymer of ethylene and at least one monomer having at least three carbon atoms; and

wherein the multi-layer film has a WVTR of at least 3.0 grams/100 square inches/day at 38°C and 100% relative humidity.

Claim 2 (original): A film according to claim 1, wherein said copolymer (ii) is an ethylene-propylene copolymer or an ethylene-propylene-butylene terpolymer.

Claim 3 (original): A film according to claim 1, wherein said hydrocarbon resin is selected from the group consisting of a petroleum resin, a terpene resin, a styrene resin and a cyclopentadiene resin.

Claim 4 (original): A film according to claim 1, wherein at least one of said skin layers comprises from about 10 to about 20 wt% of said hydrocarbon resin (i) and about 80 to about 90 wt% of said copolymer (ii).

Claim 5 (original): A film according to claim 1, comprising at least one tie layer comprising polyethylene.

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Claim 6 (canceled)

Claim 7 (original): A film according to claim 1, wherein said polyethylene in said base layer (a) is high density polyethylene or medium density polyethylene.

Claim 8 (original): A film according to claim 7, wherein said cavitating agent is calcium carbonate and said base layer comprises from about 3 wt% to about 15 wt% of said calcium carbonate.

Claim 9 (original): A film according to claim 8, wherein said base layer has a porosity of at least 20%, and wherein said film has unidirectional tear properties in the machine direction.

Claim 10 (previously presented): A method for making the film according to claim 1, said method comprising the steps of:

(i) coextruding layers having the composition of said layers (a) and (b);
(ii) casting said coextruded layers of step (i) over a casting roll;
(iii) stretching said cast film of step (ii) in the machine direction; and
(iv) further stretching said stretched film of step (iii) in the transverse direction,
wherein at least one of said skin layers comprised of (i) a hydrocarbon resin and (ii) a copolymer of ethylene and at least one monomer having at least three carbon atoms is on the casting roll side of the film.

Claim 11 (previously presented): The method of claim 10 wherein a tie layer is interposed between and coextensive with layers (a) and (b).

Claim 12 (previously presented): The method of claim 11 wherein said tie layer includes a cavitating agent.

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Claim 13 (new): A multi-layer, bioriented film stretched in the machine direction and in the transverse direction, said film comprising

(a) a base layer consisting essentially of a polyethylene and 1 wt.% to 30 wt.% of a cavitating agent, said base layer having a first and second side;

(b) skin layers on said first and second sides of said base layer, wherein at least one of said skin layers comprises (i) 5 wt.% to 30 wt.% of a hydrocarbon resin and (ii) a copolymer of ethylene and at least one monomer having at least three carbon atoms; and wherein the multi-layer film has a WVTR of at least 3.0 grams/100 square inches/day at 38°C and 100% relative humidity.

Claim 14 (new): A film according to claim 13, wherein said copolymer (ii) is an ethylene-propylene copolymer or an ethylene-propylene-butylene terpolymer.

Claim 15 (new): A film according to claim 13, wherein said hydrocarbon resin is selected from the group consisting of a petroleum resin, a terpene resin, a styrene resin and a cyclopentadiene resin.

Claim 16 (new): A film according to claim 13, wherein at least one of said skin layers comprises from about 10 to about 20 wt% of said hydrocarbon resin (i) and about 80 to about 90 wt% of said copolymer (ii).

Claim 17 (new): A film according to claim 13, comprising at least one tie layer comprising polyethylene and a cavitating agent.

Claim 18 (new): A film according to claim 13, wherein said polyethylene in said base layer (a) is high density polyethylene or medium density polyethylene.

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Claim 19 (new): A film according to claim 18, wherein said cavitating agent is calcium carbonate and said base layer comprises from about 3 wt% to about 15 wt% of said calcium carbonate.

Claim 20 (new): A film according to claim 19, wherein said base layer has a porosity of at least 20%, and wherein said film has unidirectional tear properties in the machine direction.

Claim 21 (new): A method for making the film according to claim 13, said method comprising the steps of:

- (i) coextruding layers having the composition of said layers (a) and (b);
- (ii) casting said coextruded layers of step (i) over a casting roll;
- (iii) stretching said cast film of step (ii) in the machine direction; and
- (iv) further stretching said stretched film of step (iii) in the transverse direction,

wherein at least one of said skin layers comprised of (i) a hydrocarbon resin and (ii) a copolymer of ethylene and at least one monomer having at least three carbon atoms is on the casting roll side of the film.